Ham-Ant Digest   Tue, 17 Aug 93   Volume 93 : Issue   16

Today's Topics:
                      Construction of w2fmi baluns
                      Cross polarization = 20 dB?
              How to use dip oscillator on an antenna?
                    Mac Antenna Modeling Software

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 16 Aug 93 12:44:09 GMT
From: att-out!cbnewsh!wa2sff@RUTGERS.EDU
Subject: Construction of w2fmi baluns
To: ham-ant@ucsd.edu

I am trying to build an antenna that requires a 6:1 balun to feed it.

I have read the construction articles in Communications Quarterly
by Jerry Sevik, W2FMI, and have the latest Amidon Catalog.
Although I have read the articles about 5 times, I am still having
trouble understanding what parts I need to order.
The Amidon catalog only lists a constructed 6:1 balun
and says order individual parts rather that a kit.

Has anyone built the baluns that are described in the Winter 93
issue of Communications Quarterly?
I am specifically interested in the left balun on page 44, Photo A.

If any one has a better idea please pass it along.

The antenna I am trying to build is from August 1990 of QST.
The Off-Center-Fed Dipole Revisted: A Broadband, Multiband
Antenna.

Experiences with the antenna would also be appreciated.

I want a 160 (if possible), 80, 40, 30 meter antenna to use as the sunspots
get poorer. If it works on 12/17 thats OK but not really necessary.

I already have a 5 element beam for 10/15/20 so the antenna does not
have to work on those bands.

Joe Wilkes
WA2SFF
j.e.wilkes@att.com

Date: Mon, 16 Aug 1993 18:52:08 GMT
From: elroy.jpl.nasa.gov!sdd.hp.com!col.hp.com!news.dtc.hp.com!srgenprp!
alanb@ames.arpa
Subject: Cross polarization = 20 dB?
To: ham-ant@ucsd.edu

jeffrey.n.jones (jeffj@cbnewsm.cb.att.com) wrote:

: ... I did try to work two of my friends taht were nearby
: that were using verticle antennas while I was using a dipole. We could
: could barely hear each other and as we were only about 10 miles apart
: the only thing it could be is cross polarization. From what I remember
: that makes our signals 20 db down from each other. 73!

Sure enough, 20 dB is the accepted value for loss due to cross-
polarization. However, it is a highly arbitrary number. Theoretically,
if the two antennas are precisely perpendicular, there is infinity dB
signal loss. In practice, the number can vary from near zero to
40, 50 or more dB depending on exact antenna orientation, presence of
nearby objects, feedline radiation, etc.

Does anybody know where the magic 20 dB number originally came from?

AL N1AL

Date: 16 Aug 1993 23:48:05 GMT

From: dog.ee.lbl.gov!overload.lbl.gov!agate!spool.mu.edu!news.clark.edu!
netnews.nwnet.net!news.u.washington.edu!stein.u.washington.edu!
algol@network.ucsd.edu
Subject: How to use dip oscillator on an antenna?
To: ham-ant@ucsd.edu

      Does anyone out there have any experience using a dip oscillator on
antennas? I'm finding that unless the antenna has a lumped inductance to
couple into I have no luck getting a dip. I've followed Moxon's advice
in _HF Antennas for all Locations_ and made a big (12") triangular loop
with two turns, but I'm still not having much luck. Any suggestions?
Capacitve coupling? A BIGGER loop? Does listening for a dip with audio
modulation really help that much (my dipper is homebrew -- it wouldn't
take much to add 1000 Hz square wave modulation)? Tips, hints, sea stories
all welcome... does anyone even use dippers anymore?

      Thanks,
      Sherm Lovell, WY7F algol@u.washington.edu

Date: 16 Aug 1993 18:23:11 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!noc.near.net!
jericho.mc.com!fugu!levine@network.ucsd.edu
Subject: Mac Antenna Modeling Software
To: ham-ant@ucsd.edu

In article km2@apple.com, kchen@apple.com (Kok Chen) writes:
>jreid@csugrad.cs.vt.edu (Joe Reid) writes:
>
>>Could someone please point me in the direction of some Mac antenna modeling
>>software. Thanks.
>
>
>The only one I know of is MacMININEC, sold by (this is from the README):
>
>---
>Chris Smolinski
>40 South Lake Way
>Reisterstown, MD 21136
>
>(He) can also be reached on Compuserve, send mail to 75470,3216,
>and on America Online at Chris456.
>---
>
>I have tried it on a II, IIcx, IIci, IIfx and Quadra 950 and it seems
>to work on all (some under 6.0.4 and some under 7.0 MacOS).
>

>In terms of capabilities, though, it does not come close to Brian
>Beezley's version of MiniNEC for MS-DOS. In addition to using
>Beezley's program on a '486 box, I have also successfully used it on
>my Mac using Soft-AT (software emulation of MS-DOS on a Mac)
>
>Because of Beezley's copy protection mechanism, you will need
>to transfer Beezley's entire disk to a folder on the Mac, from a
>connection to a real DOS machine, using one of the Soft-AT utilities
>first. Soft-AT emulates a DOS disk to that level!
>
>If you already have Soft-AT, I would recommend Beezley's program
>over MacMININEC. Be forewarned, software emulation is not for the
>impatient. Versus a '486 clone board (real 486-DX "Intel Inside",
>though :-) at 33 MHz, I was clocking something like 50 times slower
>with a IIci/Soft-AT combination.
>
>Disclaimer: I have no connection with Chris Smolinski, Brian Beezley,
>Intel, or Soft-AT except for having bought their goodies. I do have
>connections with the company that builds Macintosh, :-), and I have
>tried to be as neutral as I can in the above posting.
>
>73,
>
>Kok Chen, AA6TY   kchen@apple.com
>Apple Computer, Inc.

Do these antenna modelling programs have a user-friendly mode
for data entry? How would one go about, say for instance, trying
to model a Cushcraft A4 (10/15/20 tribander yagi) and a Cushcraft A3WS
(12/17 WARC dualbander yagi) for optimum spacing on a mast? Do you
really need the manufacturer to provide you trap models? I would like
to figure out some of these types of things on my one mast. Opinions
of netters and Cushcraft reps differ significantly.
73 Bob


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        ||  \\ || //     ||    \\//      \\//
--------------------------------------------------------FTAC
```
Bob Levine KD1GG 7J1AIS VK2GYN
levine@mc.com   (508) 256-1300 x247
kd1gg@wa1phy.ma   FAX (508) 256-3599

Date: Mon, 16 Aug 1993 14:35:10 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!spool.mu.edu!uwm.edu!linac!att!
cbnewsm!jeffj@network.ucsd.edu
To: ham-ant@ucsd.edu

References <24a5s9$1n7p@ilx018.intel.com>,
<wb9omc.745193347@dynamo.ecn.purdue.edu>,
<vern_suter-130893153349@mac_arhbld3n2_140.subnet66.cdc.com>~6
Subject : Re: Polarization

In article <vern_suter-130893153349@mac_arhbld3n2_140.subnet66.cdc.com>
vern_suter@pigeon.cpg.cdc.com (Vern Suter) writes:
>In article <wb9omc.745193347@dynamo.ecn.purdue.edu>,
>wb9omc@dynamo.ecn.purdue.edu (Duane P Mantick) wrote:
>
>> dbraun@ilx049.intel.com (Doug Braun) writes:
>> >I have never seen an explanation of this:
>> >What happens when people with horizontally polarized HF beams
>> >try to talk to those with vertically polarized antennas?
>> >Does it matter? Is the polarization of HF signals
>> >essentially random, because of ionospheric effects?
>
>It is my understanding that polarization makes less of a difference on
>"skywave" HF frequencies because by the time the signal reaches the
>receiving antenna, it has bounced and changed polarization many times and
>comes in kinda random. I think that would mean that polarization is more
>important for short-range comms. Does this sound right?

This is in fact true. I work hams around the USA all the time that use
GAPs, Butternuts, etc... and notice no difference between them and those
that use dipoles. I did try to work two of my friends taht were nearby
that were using verticle antennas while I was using a dipole. We could
could barely hear each other and as we were only about 10 miles apart
the only thing it could be is cross polarization. From what I remember
that makes our signals 20 db down from each other. 73!

Jeff

--
 Jeff Jones AB6MB | OPPOSE THE NORTH AMERICAN FREE TRADE AGREEMENT!
 jeffj@seeker.mystic.com | Canada/USA Free Trade cost Canada 400,000 jobs.
 Infolinc BBS 510-778-5929 | Want to guess how many we'll lose to Mexico?

End of Ham-Ant Digest V93 #16
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